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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 10/530,193   | 07/15/2005  | Toshiharu Sato       | 21900-00054-US1           | 9624             |
| 30678  | 7590        | 05/30/2006           |                           |                  |
| CONNOLLY BOVE LODGE & HUTZ LLP<br>SUITE 800<br>1990 M STREET NW<br>WASHINGTON, DC 20036-3425 |             |                      | EXAMINER<br>KWOK, HELEN C |                  |
|  |             |                      | ART UNIT<br>2856          | PAPER NUMBER     |

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/530,193

Applicant(s)

SATO ET AL.

Examiner

Helen C. Kwok

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. Figures 15-18 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Information Disclosure Statement***

3. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including

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any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by either U.S. Patent 3,888,238 (Meindl et al.) or U.S. Patent 5,891,039 (Bonnefous et al.).

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With regards to claims 1-3 and 6-11, the references, Meindl et al. and Bonnefous et al., disclose an ultrasonic diagnostic system comprising, a plurality of transducer element arrays for carrying out an ultrasonic transmission/reception to and from a test article; a switch for selecting one of the plurality of transducer element arrays; transmitting/receiving units for driving the plurality of transducer element arrays, respectively, and receiving output signals through reflection waves from the test article received by the plurality of transducer element arrays, respectively, and outputting signals based on the received signals; a displacement amount arithmetic unit for using one output signal in the plurality of transmitting/receiving units and calculating a movement displacement amount of an organization inside said test article; an amplitude arithmetic unit for using the other one output signal in the plurality of transmitting/receiving units and carrying out an amplitude computation; an image display for displaying an image on the basis of the output signal of the displacement amount arithmetic unit and the output signal of the amplitude arithmetic unit. Furthermore, the array directions of the plurality of transducer element arrays are arranged to be orthogonal or in an H-shaped not overlapping each other; linear or sector scanning. (See, Figures 1-10, column 2, line 16 to column 5 line 55 of Meindl et al.; Figures 1-5, column 3, line 66 to column 6, line 26 of Bonnefous et al.).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over either U.S. Patent 3,888,238 (Meindl et al.) or U.S. Patent 5,891,039 (Bonnefous et al.) in view of either U.S. Patent U.S. Patent 4,570,488 (Miwa et al.) or U.S. Patent 6,423,002 (Hosack) or U.S. Patent 6,755,789 (Stringer et al.) or U.S. Patent 3,881,164 (Kossoff).

With regards to claims 4-5, the references, Meindl et al. and Bonnefous, do not disclose the transducer element arrays are arranged in a T-shaped or a cross-shaped. The references, Miwa et al., Hosack, Stringer et al., and Kossoff, disclose a plurality of transducer element arrays arranged in a T-shaped or a cross-shaped. (As observed in the figures in these references). It would have been obvious to a person of ordinary skills in the art at the time of invention to have readily recognize the advantages and desirability of using other arrangement or configuration type for the transducer element arrays as suggested in the references of either Miwa et al., Hosack, Stringer et al. or Kossoff to the device of either Meindl et al. or Bonnefous et al. without departing from the scope of the invention, namely to analyze and display an image of the test article by ultrasonic detection.

With regards to claim 12, the references, Meindl et al. and Bonnefous, do not disclose a width of one of the plurality of transducer element arrays is

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adjusted so as to be small in portion close to the other ones. Kossoff discloses a cross array ultrasonic transducer comprising a width of one of the plurality of transducer element arrays is adjusted so as to be small in portion close to the other ones. (As observed in the figure; column 3, line 43 to column 4, line 7). It would have been obvious to an artisan in the art at the time of invention to have readily recognize the advantages and desirability of employing a width of one of the plurality of transducer element arrays is adjusted so as to be small in portion close to the other ones as suggested by Kosseff to the device of either Meindl et al. or Bonnefous to provide transducer element arrays to be energized at progressively different times to generate a desired shape of the beam and to electronically focusing transducer arrays onto a selected point in space. (See, column 2, line 57 to column 3, line 25 of Kosseff).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited are related to multiple ultrasound transducers.

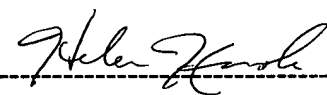
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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Helen C. Kwok  
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hck  
May 25, 2006